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| 10/549,984 | 09/19/2005 | Gerhard Hummel | 4874/ PCT | 3433 |

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| EXAMINER |
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HOOK, JAMES F

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| ART UNIT | PAPER NUMBER |
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3754

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02/21/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/549,984

Applicant(s)

HUMMEL ET AL.

Examiner

James F. Hook

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 11-26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 and 18 is/are allowed.
- 6) ☒ Claim(s) 1,2,11-16 and 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 11-15, and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi in view of Cohen and Lestak. The patent to Kikuchi discloses the recited insulation arrangement for pipes comprising at least one insulation layer 2, an outer sheath 4 which can be made of a thin metal layer which is a metal foil layer and forms a prefabricated shell to receive the insulation, the ends of the insulation layers are seen to have a Z shaped termination profile as seen in figures 3 and 4, thereby forming a shell with at least one longitudinal seam in which the insulation is inserted, where the Z shaped profile extends from a web adjacent the metal layer through a middle web, and to a lower web connected to the insulation, the shell is a full shell that is slipped over the pipe by means of the longitudinal seam which is formed by the pair of shells with the pipe inherently passing through the longitudinal slit between shells, adhesive can be used along with a flap 4a to close the shell at the seam, where the insulation is formed as two half shells which can be adhesively bonded together, in a manner that utilizes a billet type structure such as seen in figures 5-7 as structure 6, and where the metal foil layer is made of aluminum or stainless steel, where the shell is considered to have a shape. The patent to Kikuchi discloses all of the recited structure

with the exception of forming the metal foil layer of titanium foil, providing the Z shaped termination profile with a first and second terminations formed as circular disks, welding or adhesively connecting the profiles to the foil layer, and using fiberglass wool. The patent to Cohen discloses that it is old and well known to form an outer metal foil layer of an insulating structure of either aluminum, stainless steel, or titanium type foils. It would have been obvious to one skilled in the art to modify the outer metal foil layer of Kikuchi by substituting a titanium foil for the aluminum or stainless steel foil as suggested by Cohen where such is an equivalent material used for outer foil layers of insulation systems which be obvious to use in place thereof as taught by the reference to Cohen which would also thereby teach that one could expect success when the materials are shown to be known equivalents. The patent to Lestak discloses that it is old and well known in the art to provide a Z shaped first and second termination circular disks 50 which can be made of a metallic screen mesh to hold the insulation in place and create a shell in combination with outer layer 20 to hold insulation 14, where such can be attached to the outer layer and either to the pipe 12 or to a sleeve 64 by welding, where it is considered an obvious choice of mechanical expedients to use adhesive instead of welding to hold the components together as such is an old and known equivalent manner to connect two components together. It would have been obvious to one skilled in the art to provide the insulation system of Kikuchi with a first and second cylindrical disk Z shaped terminations made of metal to help support the outer foil layer and to create a shell structure to hold the insulation in place on the pipe where such can be welded to the pipe or not welded to the pipe, and can also be welded to the foil

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sleeve as suggested by Lestak where such would insure the insulation stayed in place on the pipe and would also provide some additional support for the foil layer to prevent damage to the insulation which would require repair and/or replacement thereby saving money, where one skilled in the art would only require common sense to combine the references which teach the same type of insulation systems, and one would expect success from the combination based upon the teachings of the references. The limitation added to claim 1 dealing with when the insulation and how the insulation is provided in an intermediate step is not limiting to the final structure of an article claim, therefore this limitation has not been dealt with, however, the prior art appears to teach the same assembly method and is therefore also covered by the prior art references, for instance Lestak and Kikuchi.

Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi in view of Cohen and Lestak as applied to claims 1, 2, 11-15, and 20-26 above, and further in view of Oser. The patent to Kikuchi as modified discloses all of the recited structure with the exception of forming the metal foil layer with stiffening elements such as a profiled structure, and providing such with stiffening elements. The patent to Oser discloses that it is old and well known to form an outer metal foil layer of an insulating structure of either aluminum, stainless steel, or titanium type foils, and to provide such with ribs 24 which would act as stiffening elements formed adjacent to the foil outer layer and thereby give the foil layer a pattern. It would have been obvious to one skilled in the art to modify the outer metal foil layer of Kikuchi as modified by providing such with ribs to strengthen the foil layer which would give the layer a pattern

as suggested by Oser where providing ribs would help strengthen the thin metal layer to prevent premature failure thereby saving money in replacement costs, where one skilled in the art would only require common sense to combine the teachings of Kikuchi and Oser where both are dealing with insulating structures where one would expect success.

Allowable Subject Matter

Claims 17 and 18 are allowed.

Response to Arguments

Applicant's arguments filed November 21, 2007 have been fully considered but they are not persuasive. With respect to Kikuchi, such is prefabricated before installation where it discusses in numerous places that the shells are made including the inserted insulation prior to application and since two half sections are provided at least one longitudinal seam exists that the pipe inherently would pass through during installation. It is immaterial if Kikuchi discloses more than one longitudinal seam where the claim language is not specific to the number of seams and the prior art can have more structure than applicants claimed structure and still meet the claim language especially when the claim language sets forth "at least one longitudinal seam" which is met by Kikuchi. The shell of Kikuchi acts as a mold for the insulation and therefore is teaching a shell adapted to receive insulation. The two metal termination profiles are provided by the modification teachings of Lestak, and the staggered form of the ends of the insulation structures of Kikuchi are also teaching shaped terminations, which can be

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provided with sealing and support structure as also taught by Lestak. However, it is still noted that all of these steps are not only met by the prior art but also define steps leading to the final construction of the article and are deemed not to lead to a materially different final product from an article that arrives at the same final structure but with a slightly different method of reaching that final product that is provided around a pipe to act as insulation thereto. With respect to the arguments on page 13 of the remarks section, Kikuchi shows an end of the insulation that is provided at both ends with Z shaped profiles in the insulation and including structure abutting thereto, but Lestak is provided to teach that such ends of insulation can be provided with actual structure such as a metal termination to hold the insulation in place and support the sleeve, and where this termination is attached to achieve the same supported structure that Kikuchi discloses utilizing different materials, to essentially protect and support the insulation and prevent separation of parts. As set forth about Kikuchi does define a shell adapted to receive insulation and upon modification by Lestak meets all of the shell structure. Therefore, Kikuchi does teach a shell adapted to receive the insulation as recited now, and upon modification with the teachings of Lestak would be provided with a metal termination attached to the outer sleeve which provides all of the recited claimed structure to receive and hold the insulation material. The reference to Cohen is not argued against what it teaches to modify. With respect to the argument directed at Lestak, it does teach insulation is inserted after the welding step which inherently is forming a structure adapted to receive the insulation, and once Kikuchi is modified by providing a metal termination that is welded to the outer sleeve, such is providing the

mold for the insertion of insulation thereto as set forth in Kikuchi once it were modified and thereby meets the claim language, however, as set forth above, the intermediate steps leading to a final structure of an insulated sleeve formed by specific parts is not going to be altered by the steps used to achieve the final product. With respect to the argument of hindsight the references themselves teach the same type of structure provided at the ends of each section of insulation where one reference teaches the use of a metal termination as a substitute for a known other type of termination which was provided in the base reference. As set forth above, the method steps are provided for in Kikuchi as modified and therefore the argument that such does not exist is not persuasive. With respect to Oser there is no specific argument directed at this reference and its teachings as they are used to modify the rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

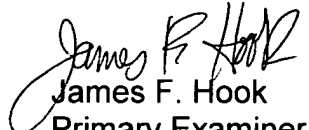
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


James F. Hook
Primary Examiner
Art Unit 3754

JFH